Long Distance Datacenter Virtualization Solutions Brief

AFORE
Acceleration FOR Ethernet™

Benefits:

- Seamlessly migrate large Virtual Machine images between data centers.
- Reduce migration times by compressing VM images for Wide Area Transport.
- Secure Wide Area Links.
- Transform IP/MPLS and Ethernet WANs for Virtualization Extension.

Features:

- VritualWIRE and VirtualFIBER technology enabling protocol transparency across IP WANs.
- CryptoWIRE AES-256 encryption.
- Lossless data compression.
- Fault tolerance with lost packet recovery techniques.
- Advanced performance monitoring.

AFORE Solutions Inc.
2680 Queensview Drive, Suite 150
Ottawa, Ontario Canada
K2B 8J9
Tel: (613)-224-5995
Fax: (613)-224-5410

For sales information:
afore_sales@aforesolutions.com

For general inquiries:
afore_info@aforesolutions.com

Rev 1.08

AFORE Enhances Long Distance Inter Data Center Virtualization

VMotion™, a technology solution provided by VMware™, leverages the virtualization of servers, storage and networking to move arunning virtual machine from one physical server to another. Solutions like VMotion™ allows customers optimize server capacity, load balance, and perform maintenance inside the data center. Virtualization solutions are now spanning multiple data centers, often separate by thousands of kilometers, for the purposes of leveraging compute resources in remote data centers for cost efficiencies as well as business continuity and disaster recovery scenarios.

Ensuring the seamless performance of VMotion™ over a wide area network may present certain challenges. VM images are also very large to migrate and so inter data center connectivity for virtual machines can be costly as high capacity, high performance links are required. Furthermore, VMotion™ requires perfect state synchronization so the performance of the wide area connectivity network becomes a key consideration. Another specific consideration is that VMotion™ requires a Layer 2 broadcast domain between hosts, to allow gratuitous ARP messages to be exchanged (used to update forwarding and routing tables of the data center switch/router network, with the new MAC-to-IP mapping on the target host).

AFORE Technology Benefits for Data Center Virtualization

To address some of the challenges of data center virtualization, AFORE has introduced the ASE3300 (Advanced Service Edge), a new class of networking platform delivering wire-speed data compression (EtherPACK), AES256 network encryption (CryptoWIRE), error protection (EtherCORRECT) and advanced service monitoring.

The ASE3300 enables the seamless Layer 2 extension with its VirtualWIRE and VirtualFIBER technology for VM migration over an IP WAN, by creating secure, AES-256 based encrypted Layer 2 tunnels over any wide area network, including pure IP-based transport networks, thereby allowing gratuitous ARP message to propagate seamlessly between hosts in different data centers. The ASE3300's EtherCORRECT enables immunity for wide area packet loss, improving the performance of TCP/IP by compensating for packet loss in the wide area, thereby improving the performance of VMotion migrations.

By providing simple, high performance, secure connectivity optimization, the ASE3300 can be used to compresses VM images over the WAN, reducing the transfer time required for VMotion™ migrations while allowing for more concurrent transfers. ASE VirtualFIBER and VirtualWIRE technology also enables additional VMWare solutions such as Storage VMotion, Distributed Resource Scheduling (DRS), and Fault Tolerance (FT).

For more information visit AFORE on the web at: www.aforesolutions.com/ASE/